

REMARKS

In the Office Action dated July 14, 2004 (Paper 17), in paragraph 1, the Examiner indicated that "the foreign priority claim filed on 03/11/2002 was not entered because the foreign priority claim was not filed during the time period set forth in 37 C. F. R. 1.55(a)(1)." The undersigned called the Examiner to ask the reason for the rejection of the priority claim, as it was our understanding that all of the necessary documents were filed as required to claim the priority date. The Examiner indicated that he would review the case and return my call. The Examiner forwarded an Office Communication dated 08/09/2004 (Paper 18) containing a copy of the Interview Summary dated July 20, 2004 wherein the Examiner indicated as follows: "The foreign priority claim filed on 3/11/2002 is entered after reviewing the documents previously filed. The Applicant will reply to the office action mailed on 7/14/2004." A copy of this Office Communication (Paper 18) and the included Interview Summary are attached to this amendment.

In the Office Action dated July 14, 2004 (Paper 17), in paragraph 2, the Examiner indicated that the application did not contain an Abstract as required by 37 C. F. R. § 1.72(b). A copy of the required Abstract is submitted above in the "Amendment to the Specification" section.

In the Office Action dated July 14, 2004 (Paper 17), in paragraphs 4 – 10, the Examiner has rejected claims 1-10. Applicant respectfully traverses these rejections. Applicant's traverse notwithstanding, all claims are amended, as indicated above, only to polish the wording to conform to US practice. In particular, as the present application resulted from a PCT, Applicant initially made a strict translation of the PCT application as filed. In the attached amended claims, Applicant has suppressed (or replaced) at each occurrence the words "characterized in that". Also the word "including" has been replaced by the more common word "comprising." We assert that these amendments do not relinquish any scope in these claims as no elements are modified in response to the current rejections as will be described below. Nevertheless we will refer to the claims individually as "amended claim No. X".

In paragraph 4 of the Office Action, the Examiner rejects claims 1 and 2 under 35 USC 102(b) as being anticipated by Stewart et al (U.S. 4,464,754). Applicant's amended independent

claim 1 reads in particular on figures 2A and 4 of our application. The main feature of claim 1 is the last one, i.e. the memory element is "controlled by the control code generation circuit to be transparent when the control code is correct, and to keep its state when the control code is incorrect". This cannot be found in Stewart.

Let us consider figure 1 of Stewart and, for example, the chips M81 and M82 having respective outputs O81 and O82. As explained in the paragraph bridging columns 1 and 2 of Stewart, one of these chips is redundant. A chip has an output, an error analyzer, and an error control code. As indicated in column 2, lines 23-27 "if a parity error is detected, the tri-state circuit output is set to a floating condition whereby the chip output appears as a high output impedance, and is effectively removed or disconnected from the circuit". In such a case, the output, for example O81, has no longer any influence on the bus DB8 to which the output is connected and "the other chip (or chips) connected to the data bit line then determines the signal of the line" (column 2, lines 29-31).

So, it is clear that, in Stewart, when a chip is in error, the signal is provided by the duplicated chip while, according to Applicant's invention, the former state of the chip is maintained. This is expressed by the words of claim 1 "keep its state when the control code is incorrect". In other words, in the invention, when a circuit is detected as being in error, the memory element maintains its former state (keeps its state) while, in Stewart, when a circuit is in error, the output is provided by a redundant circuit. Accordingly it is respectfully requested that this rejection be withdrawn and this amended independent claim 1 be passed to issue.

Since amended independent Claim 1 is shown above to be patentable over the current rejection, dependent claim 2, which depends from claim 1, is thereby also allowable over the current rejection of claim 2. Accordingly it is respectfully requested that this rejection of claim 2 be withdrawn and this amended dependent claim 2 be passed to issue.

In paragraph 5 of the Office Action, the Examiner rejects independent claims 6 and 8 under 35 USC 102(b) in view of Ratti (GB 2037034 A).

Amended independent Claim 6 reads in particular on figures 7A and 10A of the present application. Claim 6 provides that an output A of a circuit to be protected is connected to a first synchronization flip-flop and a second synchronization flip-flop while the "second flip-flop 71-

93 (is) connected to said output and written by the clock (of the first flip-flop) delayed by a predetermined duration (d)".

In amended independent claim 8 that reads in particular on figures 8A and 9A, instead of providing a delay between two clocks, there is a delay between the path of two versions of the output of a circuit, this delay being insured by a delay element 80 (figure 8A) or 90 (figure 9A).

So, in both cases a delay is provided between two versions of a signal. Such a delay between two versions of the same output of a circuit cannot be found in Ratti. As you will see from the single figure of Ratti, Ratti compares three (not delayed) versions S1, S2 and S3 of a same output, makes a majoritary vote in a circuit 1, and selects as an output S the majoritary output. Then, Ratti looks to determine whether one of the outputs S1, S2, S3 is in error by comparing S1, S2 and S3 to S. Then only, Ratti stores his results in latches 13, 17, 18, 19 that are controlled by a clock "sampled pulse P" that is identically applied to all the latches. Ratti never delays one output signal differently from the other ones. Therefore, Ratti fails to anticipate the above mentioned features of claims 6 and 8. Accordingly it is respectfully requested that this rejection be withdrawn and that amended independent claim 6 and 8 be passed to issue.

In paragraph 10 of the Office Action, the Examiner rejects independent claim 9 and dependent claim 10 under 35 USC 103(a) as being unpatentable over Lahey et al (WO 97/40579) in view of Paschal et al (US 4,093,878). Applicant's amended independent claim 9 corresponds to figures 12-15 of Applicant's application. This claim provides three identical logic circuits, each circuit being preceded by a two-input memory element.

It is respectfully submitted that it is difficult to understand this rejection and analysis by the Patent Office of the cited documents. It would be very important in this case for the Patent Office to indicate the references of the circuits on which it relies in the cited documents. In particular, Applicant cannot see in Lahey three identical circuits or memories. This can also not be seen in Paschal. Additionally, the Office states that, in Paschal, "each memory element... keep its state when the two inputs are different". If you refer to figure 1 of Paschal, you will see that this is not true. In Paschal, you can make the following truth table:

BUS REQ	BUS READY	OUTPUT
0	0	1
1	1	0
1	0	Former state

0	1	1 (and not former state)
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i.e., in the last case, the output does not keep its former state when the signals BUS REQ and BUS READY are distinct. Accordingly it is respectfully requested that this rejection be withdrawn and that amended independent claim 9 be passed to issue.

Since amended independent claim 9 is shown above to be allowable, it is respectfully submitted that amended dependent claim 10, which depends from claim 9 is also allowable. Accordingly it is respectfully requested that this rejection be withdrawn and that amended dependent claim 10 be passed to issue.

Regarding amended dependent claims 3-5, these claims are rejected in paragraph 8 of the current Office Action, under 35 U. S. C. § 103(a) as being unpatentable over Stewart et al (US 4,464,754) as applied to independent claim 1, and further in view of Paschal et al (US 4,093,878). Since amended independent claim 1 was shown above to be allowable, dependent claims 3-5, which depend from claim 1 are also allowable. Accordingly it is respectfully requested that this rejection be withdrawn and that amended dependent claims 3-5 be passed to issue.

In paragraph 9 of the current Office Action, dependent claim 7 was rejected under 35 U. S. C. § 103(a) as being unpatentable over Ratti (GB 2037034)) as applied to independent claim 6, and further in view of Ewen et al (US 5,301,196). Since amended independent claim 6 was shown above to be allowable, dependent claim 7, which depends from claim 6 is also allowable. Accordingly it is respectfully requested that this rejection be withdrawn and that amended dependent claim 7 be passed to issue.

In summary, it has been shown in this traversal of all rejections, that amended independent claims 1, 6, 8 and 9 and dependent claims 2-5, 7 and 10 are allowable and Applicant respectfully requests that all of these rejections be withdrawn and the claims as amended be passed to issue.


CONCLUSION

As indicated above, the revision to the specification, which was required has been made and is submitted herewith. No new matter has been added. Claims 1 - 10 are currently amended. Claims 1-10 are pending and all claims now pending have been shown to be allowable. It is therefore respectfully requested that the application be passed to issue. Also attached to this amendment is a copy of Office Communication dated 08/09/2004 (Paper 18) containing a copy of the Interview Summary dated July 20, 2004, wherein the Office has acknowledged the requested priority date.

In the unlikely event that the transmittal letter is separated from this document and the Patent Office determines that an extension and/or other relief is required, applicant petitions for any required relief including extensions of time, and requests that the undersigned be called as soon as possible.

Dated: January 4, 2005

Respectfully submitted,

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